BOX WITH LENTICULAR LENS INSERT

[0001] This application claims the benefit of US Provisional Patent Application Serial Number 60/440,511, filed January 16, 2003

Technical Field:

[0002] This invention relates to packaging, and more particularly to a box having graphics applied to at least one wall that provides a three-dimensional image, which can be representative of the contents of the box.

Background Art:

[0003] Boxes with graphics applied to the exterior surface are well known. However, the graphics on these prior art packages generally comprises text and/or artwork printed directly on the exterior surface of the box, or a printed label applied to the exterior of the box. In either case, the graphics applied to conventional boxes is two-dimensional and has a flat, two-dimensional look.

[0004] Some prior art packaging provides a cut-out in at least one wall, with a transparent or semi-transparent insert in the cut-out, through which the interior of the box can be viewed.

[0005] Applicant is not aware of any prior art package in which a three-dimensional image of a product, which can be the product in the package, is applied to the package. In particular, applicant is not aware of any prior art package having a cut-out in at least one wall, with a lenticular lens insert applied to the wall behind the cut-out and printed with an image of a product to produce the optical illusion that the contents of the package are being viewed through the cut-out.

Disclosure of the Invention:

[0006] The present invention comprises a package in which a panel having a three-dimensional image on it is applied to the package. In particular, the package of the invention has an opening in at least one wall, with a lenticular or other lens capable of

producing the desired visual result inserted in the opening. The lenticular lens gives a three-dimensional effect to the graphics printed on it, which can be a representation of the contents of the box, or a representation of some other image, such as another product, company logo, brand name, etc. When an image representative of the contents of the box is printed on the lens, the illusion is created that the contents of the package are being viewed through the opening.

[0007] In the particular example illustrated and described herein, the package comprises a box made from a unitary paperboard blank, with a front wall, opposite side walls, a back wall, and top and bottom walls. An opening is made through the front wall and adjoining portions of the side walls, and a lenticular lens insert with an image printed on it is affixed to the front and side walls behind the opening.

[0008] It should be understood that the principles of the invention could be applied to other types and styles of boxes, and the opening and associated lens insert need not extend around the corners into the side walls, but could be limited to only one panel or wall of the box. However, the three-dimensional effect is enhanced when the opening and insert extend from one panel into at least one adjacent angularly disposed panel.

[0009] Further, a three-dimensional effect enhanced over that obtained by simply placing a flat lens on an outer surface of a package could be obtained by omitting the opening and simply affixing the lenticular lens insert to the outer surface of the box and wrapping it around at least one corner of the box, although placing the insert behind an opening enhances the illusion that the contents of the box are being viewed through a window.

Brief Description of the Drawings:

[0010] The foregoing objects and advantages of the invention will become apparent from the following detailed description when considered in conjunction with the accompanying drawings, wherein like reference characters designate like parts throughout the several views, and wherein:

FIG. 1 is a top perspective view of a package according to the invention.

FIG. 2 is a top plan view of the package of figure 1.

FIG. 3 is an end plan view of the package of figure 1, shown with the end flaps opened.

FIG. 4 is a top perspective view similar to figure 1, but with the lenticular lens insert omitted and the flaps forming the end walls opened to better illustrate the construction of the box.

FIG. 5 is a top plan view of a blank for making the box of figures 1-4.

FIG. 6 is a top plan view of a lenticular lens insert prior to attachment to the box of figure 1.

FIG. 7 is an inside top plan view of the blank of figure 5, with the lens of figure 6 attached.

Description of the Preferred Embodiments:

[0011] A package according to the invention is indicated generally at **10** in figures 1-3. The package comprises a box **11** having a front wall **12**, a back wall **13**, opposite side walls **14** and **15**, and opposite end walls **16** and **17**. An opening **18** is formed in the front wall and adjoining portions of the side walls, as seen best in figure 4, and a panel **19** with a three dimensional image **20** on it is affixed to the front wall and side walls behind the opening, so that the image is visible through the opening and creates the illusion that the contents of the box are being viewed through the opening.

[0012] In the specific example shown and described herein, the box is made from a single unitary paperboard blank **B** comprising a generally rectangular first panel **21** having opposite side edges **22** and **23** and opposite end edges **24** and **25**, and that forms the front wall **12** in the erected box. Substantially identical second and third panels **26** and **27** are each foldably connected along one edge to a respective opposite side edge of the first panel, and form the side walls **14** and **15** in an erected box. A fourth panel **24** having substantially the same dimensions as the first panel **21** is foldably connected along one edge to an adjacent edge of second panel **26**, and forms the back wall **13** in the erected box. A narrow glue flap **28** is foldably joined along an edge of the fourth panel opposite its

connection with the second panel, and in the erected box is adhesively secured to the opposite side wall **15**, defined by panel **27**. End closure flaps **29**, **30** and **31**, **32** are foldably connected to opposite end edges of the first, second and third panels for closing the ends of the box when it is erected. The flaps **31** and **32** each has a tab **33** folded to its outer edge for insertion into the end of the box when the flaps are closed. A large cut-out **34** is formed in the first panel **21**, extending through the opposite side edges of the panel and into the adjacent second and third panels **26** and **27**, forming the opening **18** in the erected box.

[0013] The panel **19** preferably comprises a lenticular lens, or other lens capable of producing the desired result when an image is printed on it. The lens produces a three-dimensional image, and especially when placed behind the opening **18**, gives a striking visual impression of viewing the actual contents of the box through a window. The lens insert can be made of extruded PET, with vertical striations or ridges of a configuration known in the art for producing the desired visual effect when an image is printed on the lens, and is cut to a size slightly larger than the opening. In the particular example shown, the lens insert is rectangular in shape and has a marginal edge portion **35** adapted to extend beyond the edges of the cut-out **34**. This is depicted by the dot-and-dash lines in figure 6, where the cut-out is shown superposed on the panel **19**. Edge **34** is adhesively secured to the front and side walls around the cut-out, as shown in figure 7, to what will be the inside surface of an erected box. Notches **36** are made in the edges of the lens insert at locations corresponding to the folded connection between the front wall and the opposite side walls. The bottoms **37** of these notches extend slightly into the cut-out **34**, as seen best in figure 7.

The lens can be applied using conventional windowing machines, not shown.

[0014] While particular embodiments of the invention have been illustrated and described in detail herein, it should be understood that various changes and modifications may be made to the invention without departing from the spirit and intent of the invention as defined by the scope of the appended claims.